

Amendments to the Specification

Please add the following heading after the title on line 1 of page 1: --Field of the Invention--.

Please add the following heading on page 1, line 8: --Background--.

Please replace the paragraph on page 3, beginning at line 1, with the following paragraph:

-- If, in addition to that, the end weight of the filter rods is determined through an external weighing process, the difference between material used and actual filter rod mass results in the applied amount of triacetin. This procedure as well has the disadvantage that it can be referred to as an on-line process only conditionally since it requires an additional off-line weight determination of the finished filter rods. The frequency of triacetin values available with this method is determined by the frequency of the external gross weight determination processes. Since for this process in turn filter rods have to be removed from the product stream, this evaluation is likewise associated with a considerable amount of waste. In addition, the scale has the disadvantage that malfunctions occurring from certain tow defects may not be detected. One of these malfunction factors would be, e.g., the failure of a spinning nozzle during the production process of the filter tow with the result that for a short time, 2 to 5% of the nominal overall titer is missing. This results in the end in approximately ~~approx.~~ 2.5% lighter filter rods while using the same amount of material, measured based on the weight reduction of the bale. As a result, this would provide the incorrect perception of too low a triacetin content. Additionally, short-term fluctuations as well as the amount of acetate and the amount of triacetin, cannot be determined with the help of this method.--

Please replace the paragraph on page 3, beginning at line 20, with the following paragraph:

-- Another disadvantage of this procedure is that in the determination of the acetate quantity, the moisture level of said acetate is not taken into consideration. The equilibrium moisture content of cellulose acetate under normal conditions is approximately ~~approx.~~ 5.5% by weight. Under conventional production practices, the starting moisture of a filter tow may vary between approximately ~~approx.~~ 3.5 and 7% by weight due to modified process parameters. This variation results in a relative inaccuracy of the afore-mentioned weight evaluations for the triacetin and

acetate amounts. To complete the picture, it shall also be mentioned here that the end moisture level and therewith the gross weight of the finished filter rods can be influenced significantly by changing process parameters during filter rod production. By way of example, parameters such as room climate, processing speed and the temperature and moisture level of the air on the spreading nozzles shall be mentioned.--

Please add the following heading on page 4, line 5: --Summary of the Invention--.

Please replace the paragraph on page 4, beginning at line 6, with the following paragraph:

~~--Pursuant to the invention the object is achieved with a device pursuant to claim 1.~~ The device pursuant to the invention for the production of cigarette filters with simultaneous regulation of the filter material and softener compound, ~~comprising~~ comprises a conditioning section (AF) for conditioning of the supplied filter tows, a formatting section ~~device~~ (F) for producing a wrapped filter strand, and a dosing device (4) integrated into the conditioning section for dosing a softener compound, ~~is characterized in that the~~ The device furthermore comprises sensors that detect the mass flow of filter tow material (M1) and sensors that detect the sum of the mass flow from filter tow material and softener compound (M2), wherein the device contains a measuring and regulation unit that is coupled with the sensors for measuring the mass flows (M1 and M2) in such a manner that both the filter material and the softener compound can be measured and regulated independently.--

Please replace the paragraph on page 5, beginning at line 15, with the following paragraph:

-- For reasons of measuring sensitivity, especially regarding sensor Sm1, it has proven especially favorable if the mass flow M1 is evaluated before the filter tow enters the conditioning section ~~unit~~ AF.--

Please replace the paragraph on page 6, beginning at line 8, with the following paragraph:

-- It is particularly beneficial if, apart from the length-related mass, ~~also~~ the moisture content of the product to be measured can be determined; simultaneously and independently from the mass

determination, since only this way a complete mass assessment can be performed during the production process (moisture, acetate – triacetin mass).--

Please replace the paragraph on page 7, beginning at line 22, with the following paragraph:

--In the area of the filter strand, after application of the softener compound from the dosing device, position Sm₂, the profile sensor is particularly suited; with it especially a high local resolution of below 3 mm in the direction of the filter strand can be reached, and beyond that it is very well suited for measuring the homogeneity of the softener compound application. Such a profile sensor is disclosed for example in EP 0 889 321. Said sensor comprises a through-hole at a right angle to its area extension. The through-hole is delimited by metallic walls extending in the longitudinal direction and is essentially flat. ~~Said~~ The resonator is preferably filled with a dielectric. Its thickness is considerably less than its lateral dimensions, i.e., less than the traverse dimension perpendicular to the thickness.--

Please replace the paragraph on page 8, beginning at line 1, with the following paragraph:

-- The particular advantages of a microwave sensor are ~~with respect to the beneficial embodiment pursuant to claim 8 shall be~~ explained in more detail here. In the case of the microwave resonator measuring technique, there are two variables that are direct measured variables: the change in resonance frequency A and the increase in the half-width value B of the resonance curve over the resonator at empty. The first effect of the resonance frequency increment A depends above all on the shortening of the wavelength by the dielectric product that is currently located in the measuring field of the resonator (i.e., on the so-called real part of the dielectricity constant). The second effect B is caused by the conversion of microwave energy into heat, which can be measured only accurately with the resonator method (the "microwave oven effect" or the so-called imaginary part of the dielectricity constant). Since both variables are equally proportional to the mass of the product in the measuring field, both are also suited for mass measurement. In principle, parameter A is used for this. On the other hand, both measured variables are dependent in different fashions on the moisture level. Thus, the quotient of both variables B/A supplies a mass-independent measured variable that is dependent only on moisture and can be calibrated against the material

moisture level. With this variable, on the other hand, the influence of moisture on the mass value A can be compensated for so that two independent measured variables can be provided: moisture, which is independent from mass, and mass, which is independent from moisture. Moreover, the moisture information of the incoming acetate strand can be utilized to compensate for moisture fluctuations among the different acetate bales as well as within the bale by regulating the mass flow.--

Please add the following heading on page 9, line 26: --Brief Description of the Drawings--.

Please replace the paragraph on page 9, beginning on line 28 with the following paragraph:

-- ~~The operating principle of the inventive device will be explained in the following in more detail with reference to the attached drawing. The only figure in the drawing~~ Figure 1 shows an embodiment of a the device pursuant to the invention for the production of cigarette filters.--

Please add the following two paragraphs on page 10, line 1:

-- Detailed Description

The operating principle of the inventive device will be explained in more detail with reference to the attached drawing.--

Please replace the paragraph on page 10, beginning on line 22 with the following paragraph:

--In the downstream formatting section device (F), the filter strand is gathered to the diameter of the future cigarette filter, wrapped with paper, and subsequently the filter rods are cut to the required length in a cutting device 7. The sensor S_{m2} is arranged directly in front of the cutting device 7. A textile belt, called a formatting line, which firmly encloses the filter strand during the gluing operation, is used as mentioned above as the conveying means for the filter strand. As already mentioned, the speed of the said conveying means corresponds to the speed of the filter strand in the formatting device and hence past the dosing device 4. ~~Said~~ The speed is measured with the sensor S_{v2} .--

Please replace the paragraph on page 11, beginning on line 19 with the following paragraph:

--The quantity of softener that is required for this process is generally fed to the dosing device 4 by means of a gear pump. Metering of the softener quantity hereby occurs through a change in the rotational speed of the drive unit of the ~~said~~ gear pump.--

Please replace the paragraph on page 13, beginning on line 7 with the following paragraph:

Please replace the paragraph on page 13, beginning on line 28 with the following paragraph:

--With some additional calculations also a product-related and process-related moisture correction can be performed with the use of microwave sensors, as mentioned above. For this, however, it will be required to prepare sensor-specific calibration curves. ~~A more detailed illustration of the method is foregone at this point.--~~